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EXAMINER	
ONI, OLUBUSOLA	
ART UNIT	PAPER NUMBER
2168	

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/611,683	<b>Applicant(s)</b> VERMA ET AL.	
	<b>Examiner</b> OLUBUSOLA ONI	<b>Art Unit</b> 2168	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 and 31-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 31-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

**Responds to Amendment**

1. This action is responsive to communications: Application filed on 06/30/2003
2. Claim 45 has been amended, claim 30 has been cancelled and claims 56-57 has been added.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-29, 31-37 and 40-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Chandrasekaran et al. (Patent No. 6,738,971) herein after "Chandrasekaran"

Art Unit: 2168

For claim 1, Chandrasekaran teaches “a logical volume of a file system (Col. 2, line1-5); and a plurality of resource managers maintained on the file system volume ([Col. 1, lines 19-35]), each resource manager independent from one another and having associated transactional metadata and a collection of associated files” (Col. 1, lines 25-35, Col. 2, lines 10-Col. 3, lines 1-50, Col. 4, lines 50-62).

For claim 2, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches “wherein at least one resource manager comprises properties that differ from properties of another resource manager”(Col.1, lines 25-35, Col. 2, lines 10-Col. 3, lines 1-50, Col. 4, lines 50-62).

For claim 3, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches, “wherein at least one resource manager comprises transactional file system metadata that differ from transactional file system metadata of another resource manager” (Col. 2, lines 10-Col. 3, lines 1-50, Col. 3, lines 23-37, Col. 4, lines 50-67).

For claim 4, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches, “wherein one of the resource managers contains files associated with a first database, and wherein another of the resource managers contains files associated with a second database” (Col. 2, lines 10-Col. 3, lines 1-50, Col. 3, lines 12-26, Col. 4, lines 50-62, Col. 7, lines 15-29).

For claim 5, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches "wherein the file system maintains a volume control data structure associated with a set containing at least one resource manager control data structure"(Col. 3, lines 18-34).

For claim 6, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches "further comprising a mechanism in the file system for discovering a resource manager control data structure associated with a file data structure"(Col. 3, lines 18-37).

For claim 7, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches "wherein the file system maintains a first data structure having data identifying at least one resource manager control data structure" (Col. 3, lines 12-36, Col. 7, lines 14-29).

For claim 8, this claim is rejected on grounds corresponding to the argument give above for rejected claim 7 above. Chandrasekaran teaches " wherein each file in the collection includes a reference to data maintained in the first data structure to identify a resource manager control data structure for that file"(Col. 3, lines 12-26, Col. 4, lines 50-62, Col. 7, lines 15-29).

For claim 9, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches "an open file object on the volume, wherein the file system maintains a file control data structure corresponding to the open file object, the file control data structure including a reference to a resource manager control data structure that corresponds to a resource manager to which the file is associated" (Col. 3, lines 12-37).

For claim 10, this claim is rejected on grounds corresponding to the argument give above for rejected claim 9 above. Chandrasekaran teaches "wherein the file control data structure includes data that indicates that the open file object comprises the resource manager" (Col. 3, lines 12-36, Col. 7, lines 14-29)

For claim 11 this claim is rejected on grounds corresponding to the argument give above for rejected claim 9 above. Chandrasekaran teaches, "wherein the data is persisted in a record in a file system table, the record corresponding to the file" (Col. 3, lines 12-37).

For claim 12, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches "wherein the file system includes a set of functions for interfacing with the resource manager"(Col.1, lines 25-32).

For claim 13, this claim is rejected on grounds corresponding to the argument give above for rejected claim 12 above. Chandrasekaran teaches "wherein one function creates a new resource manager" (Col. 4, lines 9-14).

For claim 14, this claim is rejected on grounds corresponding to the argument give above for rejected claim 12 above. Chandrasekaran teaches "wherein one function starts a resource manager"(Col. 4, lines 50-56).

For claim 15, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches "wherein each resource manager corresponds to a directory hierarchy, and wherein the collection of associated files comprises files logically under that directory hierarchy"(Col. 1, lines 25-35, Col. 4, lines 50-62, Col. 7, lines 15-29).

For claim 16, this claim is rejected on grounds corresponding to the argument give above for rejected claim 1 above. Chandrasekaran teaches "wherein associated transactional metadata includes a log file" (Col. 2, lines 48-66).

For claim 17, Chandrasekaran teaches "separating a volume into a plurality of resource managers (Col. 1, lines 19-35), each resource manager associated with transaction metadata (Col. 3, lines 28-37); "receiving a request to open a file system object associated with a resource manager" (Col. 7, lines 19-29); "creating a file control block

Art Unit: 2168

for the file system object" (Col. 2, lines 6-9, Col. 3, lines 23-26); "determining whether the file control block references a resource manager control block (log 124), and if not, discovering a resource manager control block corresponding to the file system object and associating the file control block with the discovered resource manager control block" (Col. 3, lines 23-37).

For claim 18, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Chandrasekaran teaches "wherein discovering the resource manager control block (log 124) includes creating a resource manager control block" (Col. 2, lines 58-60, Col. 3, lines 30-37).

For claim 19, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Chandrasekaran teaches "wherein associating the file control block with the discovered resource manager control block comprises writing a pointer into the file control block that points to the resource manager control block" (Col. 3, lines 18-37).

For claim 20, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Chandrasekaran teaches "wherein discovering the resource manager control block includes determining whether the resource manager control block exists, and if not, creating the resource manager control block, and



modifying the file control block to include an association with the resource manager control block" (Col. 3, lines 3-35).

For claim 21, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Chandrasekaran teaches "wherein discovering the resource manager control block includes locating a file control block of a parent file that is associated with the resource manager control block"(Col. 3, lines 18-34).

For claim 22, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Chandrasekaran teaches "wherein discovering the resource manager control block includes locating a reference to a table location containing resource manager control block data, and using the reference to obtain a pointer to the resource manager control block"(Col. 3, lines 18-37).

For claim 23, this claim is rejected on grounds corresponding to the argument give above for rejected claim 22 above. Chandrasekaran teaches "wherein locating the reference to the table location comprises reading a header of the file object"(Col. 3, lines 12-35).

For claim 24, this claim is rejected on grounds corresponding to the argument give above for rejected claim 22 above. Chandrasekaran teaches "further comprising

Art Unit: 2168

maintaining a table including the table location in a volume control block” (Col. 3, lines 18-26).

For claim 25, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Chandrasekaran teaches “wherein each resource manager corresponds to a subdirectory in the file system, and wherein the file system object is logically associated with the subdirectory”(Col. 7, lines 15-29).

For claim 26, this claim is rejected on grounds corresponding to the argument give above for rejected claim 17 above. Chandrasekaran teaches “wherein at least one resource manager is associated with a database, and further comprising, performing a transaction that includes at least one operation by the database and at least one operation by the file system” (Col. 2, lines 1-62, Col. 3, lines 12-26).

For claim 27, is rejected on grounds corresponding to the arguments given above for rejected claim 17 and is similarly rejected.

For claim 28, Chandrasekaran teaches “means for separating a volume into a plurality of units of management” (Col. 1, lines 19-35), “each unit of management associated with transaction metadata” (Col. 3, lines 28-37); and “database means having data maintained in a table and data maintained in a first unit of management on the file system” (Col. 3, lines 23-37), “the first unit of management having at least one

Art Unit: 2168

property that is different relative to a property on a second unit of management" (Col.1, lines 25-35, Col. 2, lines 10-Col. 3, lines 1-50, Col. 4, lines 50-62).

For claim 29, this claim is rejected on grounds corresponding to the argument give above for rejected claim 28 above. Chandrasekaran teaches "wherein the transaction metadata of the first unit of management contains a log, and wherein at least one property of the first unit of management corresponds to a size of the log"(Col. 3, lines 30-37).

For claim 31, this claim is rejected on grounds corresponding to the argument give above for rejected claim 28 above. Chandrasekaran teaches "means for creating a unit of management" (Col.4, lines 9-14).

For claim 32, this claim is rejected on grounds corresponding to the argument give above for rejected claim 28 above. Chandrasekaran teaches "means for starting a unit of management" (Col. 4, lines 50-56).

For claim 33, this claim is rejected on grounds corresponding to the argument give above for rejected claim 28 above. Chandrasekaran teaches "means for shutting down a unit of management" (Col. 2, lines 60-63).

For claim 34, Chandrasekaran teaches "separating a file system volume into a plurality of parts (Col. 2, line1-5, Col. 1, lines 19-35); associating at least one of the parts with a first resource manager and at least one other of the parts with a second resource manager (Col. 1, lines 25-35, Col. 4, lines 50-62, Col. 7, lines 15-29) and "providing transactional services via each resource manager" (Col. 2, lines 10-Col. 3, lines 1-50, Col. 3, lines 28-37).

For claim 35, this claim is rejected on grounds corresponding to the argument give above for rejected claim 34 above. Chandrasekaran teaches "wherein separating a file system volume into a plurality of parts comprises collecting a plurality of sets of files" (Col. 2, line1-5)

For claim 36, this claim is rejected on grounds corresponding to the argument give above for rejected claim 35 above. Chandrasekaran teaches "wherein associating at least one of the parts with a first resource manager comprises associating a first set of files with the first resource manager" (Col. 7, lines 15-29).

For claim 37, this claim is rejected on grounds corresponding to the argument give above for rejected claim 36 above. Chandrasekaran teaches "wherein the first resource manager corresponds to a subdirectory on the file system volume, and wherein associating the first set of files with the first resource manager comprises logically storing

Art Unit: 2168

the first set of files in the directory hierarchy rooted at the subdirectory" (Col. 7, lines 15-29).

For claim 40, this claim is rejected on grounds corresponding to the argument give above for rejected claim 34 above. Chandrasekaran teaches "wherein the first resource manager provides transactional services to a database" (Col. 7, lines 15-29).

For claim 41, this claim is rejected on grounds corresponding to the argument give above for rejected claim 40 above. Chandrasekaran teaches "wherein the database maintains a reference to at least one file associated with the first resource manager" (Col. 3, lines 12-26, Col. 4, lines 50-62, Col. 7, lines 15-29).

For claim 42, this claim is rejected on grounds corresponding to the argument give above for rejected claim 34 above. Chandrasekaran teaches "wherein associating at least one of the parts with the first resource manager comprises associating a file with the first resource manager, the file having information therein that indicates the association" (Col. 3, lines 12-26, Col. 4, lines 50-62, Col. 7, lines 15-29).

For claim 43, this claim is rejected on grounds corresponding to the argument give above for rejected claim 34 above. Chandrasekaran teaches "wherein separating a file system volume into a plurality of parts comprises collecting a plurality of sets of files, and wherein associating at least one of the parts with a first resource manager

Art Unit: 2168

comprises associating files of a common type with the first resource manager”(Col. 1, lines 19-35, Col. 3, lines 12-26, Col. 4, lines 50-62, Col. 7, lines 15-29).

For claim 44, is rejected on grounds corresponding to the arguments given above for rejected claim 34 and is similarly rejected.

For claim 45, Chandrasekaran teaches “separating a file system volume into a plurality of transactional resource managers that provide transactional services” (Col. 1, lines 19-35, Col. 3, lines 28-37); and “performing a function with respect to a selected resource manager, the resource managers being independent of one another such that the function is performed independently of any other resource manager” (Col. 1, lines 25-35, Col. 4, lines 50-62).

For claim 46, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Chandrasekaran teaches “receiving a request to perform the function” (Col. 7, lines 1-23, Col. 9, lines 50-57).

For claim 47, this claim is rejected on grounds corresponding to the argument give above for rejected claim 46 above. Chandrasekaran teaches “wherein receiving the request comprises receiving an application programming interface call” (Col. 2, lines 10-21).

For claim 48, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Chandrasekaran teaches "wherein the function corresponds to a backup operation of at least some of the files of a resource manager" (Col. 3, lines 12-35).

For claim 49, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Chandrasekaran teaches "wherein the function corresponds to a restore operation of at least some of the files of a resource manager" (Col. 2, lines 48-67, Col. 3, lines 1-2).

For claim 50, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Chandrasekaran teaches "wherein the function corresponds to a roll forward to a point in time operation" (Col. 3, lines 38-61).

For claim 51, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Chandrasekaran teaches "wherein the function corresponds to a crash recovery operation" (Col. 2, lines 60-67).

For claim 52, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Chandrasekaran teaches "wherein the function corresponds to a redo phase of a recovery operation" (Col. 4, lines 22-31).

For claim 53, this claim is rejected on grounds corresponding to the argument give above for rejected claim 52 above. Chandrasekaran teaches "performing the function at least one other time" (Col. 4, lines 22-31).

For claim 54, this claim is rejected on grounds corresponding to the argument give above for rejected claim 45 above. Chandrasekaran teaches "wherein the function corresponds to an undo phase of a recovery operation" (Col. 1, lines 35-52).

For claim 55, is rejected on grounds corresponding to the arguments given above for rejected claim 45 and is similarly rejected.

For claim 56, this claim is rejected on grounds corresponding to the argument give above for rejected claim 28 above. Chandrasekaran teaches "wherein the transaction metadata of the first unit of management contains a log, and wherein at least one property of the first unit of management corresponds to a mode of logging data to the log" (Col.3, lines 30-37).

For claim 57, this claim is rejected on grounds corresponding to the argument give above for rejected claim 28 above. Chandrasekaran teaches "wherein at least one property of the first unit of management corresponds to a log size" (Col.3, lines 30-36).



***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandrasekaran et al. (Patent No. 6,738,971) herein after "Chandrasekaran in view of Choy et al. (Pub No. 2003/0200467) hereinafter "Choy"

For claim 38, this claim is rejected on grounds corresponding to the argument give above for rejected claim 37 above. Chandrasekaran does not explicitly teaches "a security model for the files of the first resource manager, in which the files within the first resource manager are at most as secure as an object representing the first resource manager".

However, Choy teaches "a security model for the files of the first resource manager, in which the files within the first resource manager are at most as secure as an object representing the first resource manager" (008, 0025-0028, 0042, 0044).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Chandrasekaran's teachings of having files within the resource manager been as secure as an object within the resource manager at Col. 3, lines 12-26, Col. 7, lines 15-29 with Choy, and using a security model such as ACL which is well known in the art as a concept in computer security used to enforce privilege separation. It is a means of determining the appropriate access rights to a given object depending on certain aspects of the process that is making the request, principally the process's user identity. ACL can also be a table that tells a computer operating system which access rights each user has to a particular system object, such as a file directory or individual file. Each object has a security attribute that identifies its access control list. The list has an entry for each system user with access privileges.

For claim 39, this claim is rejected on grounds corresponding to the argument given above for rejected claim 38 above. Chandrasekaran does not explicitly "wherein the security model prevents setting an ACL to represent a greater degree of access control relative to a degree of access control of the object".

However, Choy teaches "wherein the security model prevents setting an ACL to represent a greater degree of access control relative to a degree of access control of the object"(008, 0025-0031, 0042, 0044, fig.2-11)

**Response To Amendment**

7. Applicant's arguments filed May 8, 2006 been fully considered but they are not persuasive. The examiner respectfully transverse applicant's argument.

As per claim 1, applicant argued that Chandrasekaran does teach "a logical volume of a file system; and a plurality of resource managers maintained on the file system volume each resource manager independent from one another and having associated transactional metadata and a collection of associated files.

On the contrary Chandrasekaran teaches "a logical volume of a file system (Col. 2, line1-5); and a plurality of resource managers maintained on the file system volume ([Col. 1, lines 1-35]), each resource manager independent from one another and having associated transactional metadata and a collection of associated files" (Col. 1, lines 25-35, Col. 2, lines 10-Col. 3, lines 1-46, Col. 4, lines 50-62, fig. 1A-2) wherein applicant argued Chandrasekaran does not teaches a plurality of resource managers maintained on the file system volume, however Chandrasekaran's teachings at Col. 1, lines 1-35, fig. 1A-fig.2, includes distributed transactions that are performed by multiple resource managers . Chandrasekaran also teaches as argued by applicant and in specification [0007], breaking up into smaller parts with respect to transactions the database system (volume) in to 104 and 106, each having a resource manager independent from each other, wherein resources managers also manages the resources of the database system and each maintaining a set of metadata (log) for handling of files.

Art Unit: 2168

As per claim 3, applicant argued Chandrasekaran does not teaches, “wherein at least one resource manager comprises transactional file system metadata that differ from transactional file system metadata of another resource manager”. On the contrary Chandrasekaran teaches “wherein at least one resource manager comprises transactional file system metadata that differ from transactional file system metadata of another resource manager” (Col. 3, lines 23-37, Col. 2, lines 10-Col. 3, lines 1-46, Col. 4, lines 50-67), wherein resource managers also manages the resources of the database system and each maintaining a set of metadata (log) for handling of files.

As per claim 15, applicant argued Chandrasekaran does not teach “wherein each resource manager corresponds to a directory hierarchy, and wherein the collection of associated files comprises files logically under that directory hierarchy”. On the contrary, Chandrasekaran teaches wherein each resource manager corresponds to a directory hierarchy, and wherein the collection of associated files comprises files logically under that directory hierarchy”(Col. 1, lines 25-35, Col. 4, lines 50-62, Col. 7, lines 15-29) however Chandrasekaran’s teachings at Col. 1, lines 1-35, fig. 1A-fig.2, includes distributed transactions that are performed by multiple resource managers. Chandrasekaran teaches as argued by applicant and in specification 0007, breaking up into smaller parts with respect to transactions the database system (volume) in to 104 and 106, each having a resource manager independent from each other, wherein resources managers also manages the resources of the database system and each maintaining a set of metadata (log) for handling of files.

As per claim 17, applicant argued Chandrasekaran does not teaches “separating a volume into a plurality of resource managers, each resource manager associated with transaction metadata, receiving a request to open a file system object associated with a resource manager, creating a file control block for the file system object, determining whether the file control block references a resource manager control block, and if not, discovering a resource manager control block corresponding to the file system object and associating the file control block with the discovered resource manager control block”. On the contrary Chandrasekaran teaches “separating a volume into a plurality of resource managers (Col. 1, lines 19-35), each resource manager associated with transaction metadata (Col. 3, lines 28-37, Col. 2, lines 10-Col. 3, lines 1-46, Col. 4, lines 50-62) wherein resources managers also manages the resources of the database system and each maintaining a set of metadata (log).

“receiving a request to open a file system object associated with a resource manager” (Col. 7, lines 19-29); “creating a file control block for the file system object” (Col. 2, lines 6-9, Col. 3, lines 23-26); “determining whether the file control block references a resource manager control block (log 124), and if not, discovering a resource manager control block corresponding to the file system object and associating the file control block with the discovered resource manager control block” (Col. 3, lines 23-37). Wherein applicant argued that Chandrasekaran does not teach separating a volume into plurality of resource managers, however Chandrasekaran’s teachings at Col. 1, lines 1-35, fig. 1A-fig.2, includes distributed transactions that are performed by multiple resource

Art Unit: 2168

managers. Also Chandrasekaran's teaches resources managers independent from one another. Resource managers could be used to coordinate the committing of distributed transactions, wherein the changes communicated to each first resource manager is not received at the second resource managers, therefore they are independent from one another. The resources managers also manages the resources of the database system and each maintaining a set of metadata (log) for handling of files, thus teachings are synonymous.

As per claim 28, applicant argued Chandrasekaran does not teaches "means for separating a volume into a plurality of units of management, each unit of management associated with transaction metadata and database means having data maintained in a table and data maintained in a first unit of management on the file system, the first unit of management having at least one property that is different relative to a property on a second unit of management. On the contrary Chandrasekaran teaches "means for separating a volume into a plurality of units of management" (Col. 1, lines 19-35), "each unit of management associated with transaction metadata" (Col. 2, lines 1-60, Col. 3, lines 1-46); and "database means having data maintained in a table and data maintained in a first unit of management on the file system" (Col. 3, lines 23-50, fig. 1A-2), "the first unit of management having at least one property that is different relative to a property on a second unit of management" (Col. 1, lines 25-35, Col. 4, lines 50-62) Wherein applicant argued that Chandrasekaran does not teach separating a volume into plurality of resource managers, however Chandrasekaran's teachings at Col. 1, lines 1-35, fig. 1A-

Art Unit: 2168

fig.2, includes distributed transactions that are performed by multiple resource managers.

As per claim 34, applicant argued that Chandrasekaran does not teaches “separating a file system volume into a plurality of parts, associating at least one of the parts with a first resource manager and at least one other of the parts with a second resource manager and providing transactional services via each resource manager”. On the contrary, Chandrasekaran teaches “separating a file system volume into a plurality of parts (Col. 2, line1-5, Col. 1, lines1-35); associating at least one of the parts with a first resource manager and at least one other of the parts with a second resource manager (Col. 1, lines 25-35, Col. 4, lines 50-62, Col. 7, lines 15-29) and “providing transactional services via each resource manager” (Col. 3, lines 28-37). Wherein Chandrasekaran’s teachings as argued by applicant and in specification [0007], breaking up into smaller parts with respect to transactions the database system (volume) in to 104 and 106, each having a resource manager independent from each other. The resource managers also manage the resources of the database system and each maintaining a set of metadata (log) for handling of files.

As per claim 45, this claim is rejected on grounds corresponding to the arguments given above for rejected claim 34 and is similarly rejected.

Art Unit: 2168

As per claim 38, this claim is rejected on grounds corresponding to the argument give above for rejected claim 37 above. Chandrasekaran does not explicitly teaches "a security model for the files of the first resource manager, in which the files within the first resource manager are at most as secure as an object representing the first resource manager".

However, Choy teaches "a security model for the files of the first resource manager, in which the files within the first resource manager are at most as secure as an object representing the first resource manager" (008, 0025-0028, 0042, 0044).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Chandrasekaran's teachings of having files within the resource manager been as secure as an object within the resource manager at Col. 3, lines 12-26, Col. 7, lines 15-29 with Choy, and using a security model such as ACL which is well know in the art as a concept in computer security used to enforce privilege separation. It is a means of determining the appropriate access rights to a given object depending on certain aspects of the process that is making the request, principally the process's user identity. ACL can also be a table that tells a computer operating system which access rights each user has to a particular system object, such as a file directory or individual file. Each object has a security attribute that identifies its access control list. The list has an entry for each system user with access privileges.

For claim 39, this claim is rejected on grounds corresponding to the argument give above for rejected claim 38 above. Chandrasekaran does not explicitly "wherein the



Art Unit: 2168

security model prevents setting an ACL to represent a greater degree of access control relative to a degree of access control of the object".

However, Choy teaches "wherein the security model prevents setting an ACL to represent a greater degree of access control relative to a degree of access control of the object"(008, 0025-0031, 0042, 0044, fig.2-11)

### **CONCLUSION**

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLUBUSOLA ONI whose telephone number is 571-272-2738. The examiner can normally be reached on 7.30-5.00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIM, VO can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

Art Unit: 2168

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OLUBUSOLA ONI

Examiner

Art Unit 2164

A handwritten signature in black ink, appearing to read "Kpham", with a long horizontal flourish underneath.

**KHANH B. PHAM**  
**PRIMARY EXAMINER**